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RECEIVED

SEP 16 1999 September 14, 1999

Jodie Donovan-May
Policy Division, Common Carrier Bureau
Federal Communications Commission
The Portals
445 Twelfth Street, N.W.
Eighth Floor
Washington, D.C. 20554

Re: Missouri Petition for Preemption, CC Docket No. 98-122

Dear Ms. Donovan-May:

This responds to your request of September 7, 1999, for additional information about the communications services that public power utilities are offering, particularly in rural areas, in states that do not have barriers to municipal entry. We also respond to the *ex parte* submissions that SBC Communications made in three meetings with Commission staff on September 7, as reflected in a letter from B. Jeannie Fry to Magalie R. Salas dated September 8, 1999.

I. COMMUNICATIONS SERVICES OFFERED BY PUBLIC POWER UTILITIES IN RURAL AREAS

The American Public Power Association represents the interests of approximately 2,000 public power utilities located in all states except Hawaii.¹ Approximately three-fourths of these utilities serve rural communities that have less than 10,000 residents. Many such utilities have stepped forward to fill voids in communications services left by the private sector, just as they stepped forward to provide electric power decades ago when privately-owned electric utilities literally left their communities in the dark while focusing on more lucrative urban markets. In the absence of state barriers to entry, many additional public power utilities could help our Nation overcome the growing "Digital Divide" between urban and rural areas.

¹ Public power utilities include electric power systems owned and operated by municipalities, counties, state and regional power authorities, public power districts, irrigation districts and various other government entities.

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We do not have comprehensive data on all of the communications services that public power utilities are currently providing. Instead, we offer you (1) a partial list of municipal cable systems, identifying 75 separate communities in 24 states, primarily located in rural or small markets (Attachment A); (2) website addresses of ten representative public power utilities (Attachment B); (3) detailed descriptions of three communications networks built by public power systems (Glasgow, KY; Harlan, IA; and Vineland, NJ); and (4) a description of the Municipal Electric Authority of Georgia (MEAG), which, if freed of State barriers to entry, could furnish telecommunications support to public and private communications providers throughout the state of Georgia.

II. RESPONSE TO SBC's *EX PARTE* SUBMISSION

In its *ex parte* submission of September 7, SBC makes six main arguments: (1) that this case is "controlled" by *City of Abilene v. FCC*, 164 F.3d 49 (D.C. Cir. 1999); (2) that the rationale of *Gregory v. Ashcroft*, 501 U.S. 452 (1991), applies to municipal electric utilities as well as to municipalities because municipal electric utilities and municipalities are indistinguishable under Missouri law; (3) that the text of Section 253(a) contains no clear and unmistakable language compelling preemption in this case; (4) that the Commission cannot consider the legislative history of Section 253; (5) that the legislative history does not, in any event, support preemption in this case; (6) that HB 620 is a limited, reasonable response to a perceived conflict of interest; and (7) that SBC has now lost 17 percent of the business access lines to competitors in Missouri. None of these claims has merit.

First, this case is plainly not "controlled" by *Abilene*. To the contrary, the Commission expressly stated in paragraph 179 of the *Texas Order* that "we do not decide at this time whether section 253 bars the state of Texas from prohibiting the provision of telecommunications services by a municipally-owned electric utility." Similarly, the D.C. Circuit made clear in footnote 7 of its *Abilene* opinion that it was not deciding "whether public utilities are entities within § 253(a)'s meaning." As the Commission assured the D.C. Circuit during oral argument in the *Abilene* case, that issue would be decided for the first time in this case.

Second, SBC's contention that municipal electric utilities are indistinguishable from municipalities under Missouri law is both incorrect and irrelevant. First, as *City of Springfield's* Charter shows, several of SBC's factual assertions are simply wrong. According to SBC, "[i]t is well settled under Missouri law that publicly owned utilities are run by the municipality's city council;" that a municipal electric utility "may even be abolished ... by the City Council;" and that "[m]unicipally owned utilities do not pay franchise taxes; instead, they may make voluntary payments to the city." SBC Submission at 2, 3, 4. Under the *Springfield Charter*, however, *Springfield's* municipal electric utility is run by the Board of Public Utilities rather than the City Council; the City Council cannot unilaterally abolish the Board;² and

² Under Section 19.21 of the Charter, the Board may be abolished by a 2/3 vote of the total membership of the City Council and the Board. If all nine members of the City Council supported such a vote, they would still have to be joined by at least five of the Board's eleven members.

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the municipal electric utility has a mandatory, not a voluntary, obligation to make payments "in lieu of taxes." Charter, Article XVI, §§ 16.2(1), 19.21 and 16.15, Attachment Q to Missouri Petition.

In any event, even if municipal electric utilities and municipalities were indeed indistinguishable for the purposes that SBC discusses, it does not follow that the holding of *Abilene* as to municipalities necessarily applies to municipal electric utilities. The key question in preemption analysis is whether Congress intended that result. *Gregory v. Ashcroft* does not change that question but merely imposes an elevated standard of certainty in cases involving fundamental or traditional areas of state sovereignty. Here, whatever Congress may have intended with respect to municipalities, as such, it made the necessary "plain statement" with respect to municipal electric utilities. That is all that matters.

Third, it is true that Section 253(a) does not expressly mention "municipal electric utilities." *Ashcroft* does not require an express statement, however, but merely a "plain" statement of congressional intent. *Ashcroft*, 502 U.S. at 467. Relying on *Salinas v. United States*, 118 S.Ct. 469 (1997), which the *Abilene* court did not consider, we continue to submit that Congress satisfied the *Ashcroft* standard by using the modifier "any" before "entity" in Section 253(a). In *Salinas*, the Supreme Court held that Congress's expansive, unqualified use of the modifier "any" precludes efforts to impose narrowing interpretations, introduces no ambiguity, and satisfies *Ashcroft*'s "plain statement" standard. *Id.* at 473. We urge the Commission to apply the same rationale here.

Fourth, SBC's suggestion that the Commission cannot consider legislative intent in applying the *Ashcroft* standard is simply wrong. *Ashcroft* does not require an agency or court to ignore any of the traditional tools of statutory construction, including the language, structure, legislative history and purposes of the statute. *Bell Atlantic Telephone Companies v. Federal Communications Comm'n*, 131 F.3d 1044 (D.C. Cir. 1997). *Ashcroft* simply requires that the agency or court deny preemption if it has any doubts after exhausting these tools. Thus, the Commission itself observed in the *Texas Order* that it is appropriate to search for the meaning of Section 253(a) "in the statute or its legislative history." *Texas Order*, ¶ 187. The Supreme Court considered legislative intent in *Salinas*, 118 S.Ct. at 475, and the D.C. Circuit considered legislative history in *Abilene*, finding that it does not apply to municipalities, as such, 164 F.3d at 53 n.7.

Fifth, as Missouri Municipals showed in their Petition, at 6-11, the legislative history of Section 253(a), especially the history in the 103rd Congress, is replete with proof that Congress understood and intended that the Commission protect public power utilities from state barriers to entry. As the Missouri Municipals pointed out, the American Public Power Association and others advised Congress that there were many kinds of public power utilities that could contribute to the rapid development of the National Information Infrastructure, and Congress responded favorably by crafting the key definitions and preemption provisions of the Telecommunications Act so as to encourage as many of these utilities to step forward as possible. Indeed, in its brief to the D.C. Circuit in the *Abilene* case, the Commission itself acknowledged that the legislative history of Section 253(a) includes that of the 103rd Congress and that both the 103rd and 104th Congresses frequently referred to public power utilities, as distinguished from municipalities.

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In arguing that the legislative history does not support preemption in this case, SBC makes two main points. First, it contends that Congress was not thinking about publicly owned utilities when it stated in the Joint Conference Report accompanying the Telecommunications Act that "explicit prohibitions on entry by a utility into telecommunications are prohibited under [Section 253]." SBC Submission at 6, quoting S. Conf. Rep. 104-230 at 127. Second, SBC maintains that the Missouri Municipals' reliance on post-enactment letters from Members of Congress is equally unavailing because such statements carry little weight. SBC Submission at 6-7.

Notably, SBC addresses only a single statement in the legislative history of the 104th Congress and studiously ignores the history of the 103rd Congress, which makes clear that Congress most assuredly had electric utilities in mind when it drafted the operative language of Section 253(a). SBC's unsupported speculation that Congress did not mean what it said in its statement in the Joint Conference Report was also flatly refuted by its author, Rep. Dan Shaefer (R-CO), who explained in a letter to Chairman Reed Hundt dated August 5, 1996, that his language was intended to cover utilities of all kinds, regardless of the form of ownership or control. Attachment I to the Missouri Petition for Preemption. As to the other letters from Members of Congress, the Missouri Municipals do not rely on them to fill a gap in the record but merely to add further weight to the many pre-enactment statements already present. Furthermore, the Commission itself relies on post-enactment statements of knowledgeable legislators when they have useful clarifications to give, as the Commission recently did in its Universal Service litigation.

Sixth, SBC's effort to justify HB 620 as a limited, reasonable legislative response to a perceived conflict of interest must fail for several reasons. First, Section 253(a) does not authorize a state to allow entities to provide some telecommunications services but not others -- it prohibits states from enacting measures that may have the effect of prohibiting the provision of "any interstate or intrastate telecommunications service (emphasis added)." Second, the supposed "perceived conflict of interest" simply does not exist, as telecommunications providers, including municipal providers, are regulated by the Missouri Public Service Commission rather than by local governments. Third, and most important, the Commission rejected this very argument in paragraph 190 of the *Texas Order*, finding that

[W]e recognize that entry by municipalities into telecommunications may raise issues regarding taxpayer protection from the economic risks of entry, as well as questions concerning possible regulatory bias when separate arms of a municipality act as both a regulator and a competitor. We believe, however, that these issues can be dealt with successfully through measures that are much less restrictive than an outright ban on entry, permitting consumers to reap the benefits of increased competition.

Finally, we are not in a position to challenge the "estimated lines served by CLECs" and "Percentage of business lines lost to competitors" in SBC's chart entitled "Missouri Competition Numbers." We note, however, that even if SBC's figures were correct, they would be of minimal value here because: (1) they include resold lines and thus do not reflect the true extent of facilities-based competition in Missouri, even for business access lines; (2) they include only business access lines and

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thus say nothing about competition in the residential market; and (3) they do not separate urban and rural access lines and thus do nothing to disprove the existence of a Digital Divide in Missouri.

A few months ago, the Attorney General of Missouri found, based on SBC's own data, that competition is totally lacking in Missouri's residential market. Attachment to Letter from James Baller to Magalie Roman Salas dated April 26, 1999. SBC has offered nothing to show that anything has changed.

If you have additional questions or would like more information, please let me know.

Sincerely,



James Baller

Enclosures

cc: Mr. Christopher Wright
Mr. James Carr
Ms. Aliza Katz
Mr. Bill Bailey
Ms. Margaret Egler
Mr. Kyle Dixon
Ms. Sarah Whitesell
Individuals on the Attached Lists

CERTIFICATE OF SERVICE

I, James Baller, hereby certify that on this 14th day of September 1999, I caused copies of the foregoing letter to be served on the parties on the attached Service List by first-class U.S. Mail.

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Missouri Municipals

September 14, 1999

ATTACHMENT A

MUNICIPALLY OWNED CABLE TELEVISION SYSTEMS

compiled by Wanda Rakes-Harrell

Communities marked with an asterisk also have a municipally owned electric system.

ALABAMA

Lincoln Cable TV
Box 172
Lincoln, Ala. 35096
Carroll L. "Law" Watson, Mayor
205/763-7777
Subscribers: 1,360
Channels: 36
Basic monthly rate: \$21.50
Established 1982

Opp Cablevision*
P.O. Box 610
Opp, Ala. 36467
Charles McGowan
334/488-4571
Subscribers: 3,550 subscribers
Channels: 48
Basic monthly rate: \$17.00
Utility use: none
Established 1967

Riverside Utilities*
413 E. Laurel Ave., Box 2050
Foley, Ala. 36536
H. Sewell St. John Jr.
334/943-5001
Subscribers: 6,466
Channels: 32
Basic monthly rate: \$13.00
Utility use: no
Established: 1982

ALASKA

Angeon Cable Vision
Box 189
Angeon, Alaska 99820
Clarice Frank
907/788-3653
Subscribers: 86
Channels: 20
Basic monthly rate: \$54.50
Established: 1982

Kake, City of
Box 300
Kake, Alaska 99830
Cindy Martin
907/785-3804
Subscribers: 128
Channels: 29
Basic monthly rate: \$49.00
Established: 1984

Kiana, City of
Box 150
Kiana, Alaska 99749
Hazel Apok
907/475-2136
Subscribers: 85
Channels:
Basic monthly rate: \$50
Established: 1984

Kotlik, City of*
Utility Office 20068
Kotlik, Alaska 99620
Joseph Mika
907/899-4826
Subscribers: 57
Channels: 9
Basic monthly rate: \$35
Utility use: meter reading
Established: 1988

White Mountain Utilities
P.O. Box 130
White Mountain, Alaska 99784
Dorothy Barr
907/838-3411
Subscribers: 37
Channels: 13
Basic monthly rate: \$50.00
Established: 1980

ARKANSAS

Conway Corp.*
Box 99
Conway, Ark. 72033
Richard Arnold
501/450-6000
Subscribers: 16,300
Channels: 30 basic, 24 expanded basic
Basic monthly rate: \$15.50
Utility use: Broadband Internet Services (metering planned)
Established: 1980-rebuilt to fiber-optic node system in 1988

Locksburg Cablevision
Box 14
Locksburg, Ark. 71848
Wesley Wiederhoelt
501/289-3261
Subscribers: 299
Channels: 25 (capacity is 36)
Basic monthly rate: \$18.00
Established: 1982

Paragould City Cable*
P.O. Box 9
Paragould, Ark. 72451-009
David Presley
870/239-7700
Subscribers: 9,206
Channels: 67
Basic monthly rate: \$12.50
Utility use: yes
Established 1991

CALIFORNIA

San Bruno Municipal Cable TV
3985 Camino Real
San Bruno, Calif. 94066
David A. Thomas
650/877-8889
Subscribers: 12,100
Channels: 59
Basic monthly rate: \$23.15
Established: 1971 (rebuild in process, 1997)

COLORADO

Center Municipal Cable System*
Box 400
Center, Colo. 81125
Darrell T. Davis
719/754-3497
Subscribers: 680
Channels:
Basic monthly rate: \$9.00
Utility use: load control
Established: 1984

Copper Mountain Metropolitan District Cable TV
Box 3002
Copper Mountain, Colo. 80443
Elizabeth Black
303/968-2837
Subscribers: 879
Channels: 30 (capacity is 60)
Basic monthly rate: \$28.95
Established: 1976

FLORIDA

Newberry, City of*
City Hall
Newberry, Fla. 32869
Jeff Bass
850/472-2161
Subscribers: 750
Channels: 36
Basic monthly rate: \$17.00
Utility use: none
Established: 1974

Valparaiso Communications
465 Valparaiso Parkway, Box 296
Valparaiso, Fla. 32580
Burt B. Bennett
850/729-5402
Subscribers: 1,794
Channels: 53
Basic monthly rate: \$15.25
Established 1976

GEORGIA

Covington Cable TV*
Box 1527
Covington, Ga. 30015
Gary Curtis
770/385-2044
Subscribers: 9,729
Channels: 67
Basic monthly rate: \$12.95
Utility use: air-conditioning load management
Established: 1980

Monroe Water, Light and Gas Commission*
P.O. Box 725
215 N. Broad St.
Monroe, Ga. 30655-0725
Mark Ennis, General Manager
770/267-3429
Subscribers: 5,147
Channels: 64
Basic monthly rate: \$17.00 inside city limits; \$21.00 outside
Utility use: telephone, SCADA
Established: 1972

IOWA

Bellevue Municipal Cable TV*
106 N. Third
Bellevue, Iowa 52031
Greg Schulte, Supervisor
319/872-3357
Subscribers: 900
Channels: 39
Basic monthly rate: \$18.00
Utility use: load management (planned)
Established: 1993

Dayton Cable TV Corp.*
202 First Ave. S.E.
Dayton, Iowa 50530
Randy Danielson
515/447-3342
Subscribers: 295
Channels: 31 (capacity is 35)
Basic monthly rate: \$18.00
Utility use: no
Established: 1983

Cedar Falls Utilities Communications*
P. O. Box 769
Cedar Falls, Iowa 50613
Dan Mills
319/268-5220
Subscribers: 5,500
Channels: 77
Basic monthly rate: \$21
Utility use: communications link for water, pumping and substation facilities; provide telephone service for utilities and city offices
Established: 1996

MUNICIPALLY OWNED CABLE TELEVISION SYSTEMS

Coon Rapids Cable System*

123 Third Ave., Box 207
Coon Rapids, Iowa 50050
Bras Monold
712/684-2225
Subscribers: 488
Channels: 35
Basic monthly rate: \$18.00
Utility use: none
Established: 1982

Hartan Municipal Cable (Mach I)*

405 Chetburn Ave.
Hartan, Iowa 51537
Jerry Quick, General Manager
712/755-5182
Subscribers: 1,200 Cable, 200 Internet
Channels: 60
Basic monthly rate: \$18.95
Utility use: load management, demand-side management, system monitoring planned; Mach I also provides high-speed data service up to 10 MB; telephone service is planned
Established: 1996

Hartley Municipal Cable System*

11 S. Central Ave.
Hartley, Iowa 51346
Bryan Garrison
712/728-2240
Subscribers: 728
Channels: 25
Basic monthly rate: \$13.00
Utility use: maybe load management

Hawarden Integrated, Technology, Energy & Communications System* (HITEC)

Box 231
Hawarden, Iowa 51023
Tom Kane
712/552-2565
Subscribers: 800
Channels: 40 basic, 8 premium
Basic monthly rate: \$21
Utility use: planned
Established: 1997

Lenox Municipal Cablevision*

205 Main St.
Lenox, Iowa 50851
David Ferris
515/333-2550
Subscribers: 560
Channels: 25
Basic monthly rate: \$16.50
Utility use: load management and meter reading
Established: 1988

Manilla Municipal Cable*

166 Sixth Ave.
Manilla, Iowa 51454
Jon Vinnink
712/654-3952
Subscribers: 333
Channels: 29
Basic monthly rate: \$12.00
Utility use: none
Established: 1983

Manning Municipal Communication Television System Utility*

719 Third St.
Manning, Iowa 51455
Kent Hisebeck
712/653-3214
Subscribers: 800
Channels: 28 (capacity is 30)
Basic monthly rate: \$15.00
Utility use: load management
Established: 1982

Mapleton Municipal CATV*

513 Main St.
Mapleton, Iowa 51034
Karl Uhl
712-882-1351
Subscribers: 530
Channels: 30
Basic monthly rate: \$19.08
Utility use: none
Established: 1992

Pringhar Municipal Cable TV*

166 First St. S.W.
Pringhar, Iowa 51245
Merle Negus
712/757-2436
Subscribers: 378
Channels: 28 (capacity is 32)
Basic monthly rate: \$13.00
Utility use: load management
Established: 1981

Samborn Electric & Telecommunications Utility*

102 Main St.
Samborn, Iowa 51248
Allen Bonderman
712/729-3874
Subscribers: 537
Channels: 29 (capacity is 38)
Basic monthly rate: \$13.00
Utility use: load management/air conditioners and water heaters
Established: 1981

Wall Lake Municipal Cable*

200 W. 2nd
Wall Lake, Iowa 51466
Sharon Faber
712/664-2216
Subscribers: 265
Channels: 18
Basic monthly rate: \$14.50
Utility use: no
Established: 1982

KANSAS

Altamont Cable System*

Box 306
Altamont, Kan. 67330
Elizabeth Finley
316/784-5812
Subscribers: 376
Channels: 35 (capacity is 36)
Basic monthly rate: \$18.50
Utility use: no
Established: 1983

Baxter Cablevision

City of Baxter Springs
Box 577
Baxter Springs, Kan. 66713
Jim Thiele
316/858-2114
Subscribers: 1,344 subscribers
Channels: 41 (capacity is 21)
Basic monthly rate: \$15.95
Established: 1980

Cawker City*

Box 2
Cawker City, Kan. 67430
Wayne Musgrove
913/781-4713
Subscribers: 287
Channels: 30
Basic monthly rate: \$12.00
Utility use: exploring load management, meter reading
Established: 1977

Columbus Cablevision

300 E. Maple
Columbus, Kan. 66726
Jeff Clawson
316/429-2159
Subscribers: 1,185
Channels: 41
Basic monthly rate: \$15.00
Established: 1980

Courtland Cable TV

Box 143
Courtland, Kan. 66939
Tim Garman
785/374-4365
Subscribers: 145
Channels: 20
Basic monthly rate: \$14.50
Established: 1982

KENTUCKY

Barbourville Cable TV*

196 Daniel Boone Drive, P.O. Box 1630
Barbourville, Ky. 40906
Randall Young
606/546-3187
Subscribers: 2,707
Channels: 55 (9 Premium)
Basic monthly rate: \$25.00
Utility use: High Speed Two Way Data and Internet (Cable Modem Com 21)
Established: 1985

Bardstown Cable TV*

220 N. Fifth St., Box 368
Bardstown, Ky. 40004
Lawrence A. Hamilton
502/348-9711
Subscribers: 6,915
Channels: 40 (5 premium)
Basic monthly rate: \$15.85 in town, \$18.70 outside of town
Utility use: none
Established: 1985

Frankfort Electric & Water Plant Board-Cable Division*

317 W. Second St.
Frankfort, Ky. 40601
Warner Caines
502/223-3491
Subscribers: 17,400
Channels: 82 (6 premium)
Basic monthly rate: \$18.70
Utility use: pending
Established: 1982

Glasgow, City of*

100 Mallory Drive, Box 1900
Glasgow, Ky. 42141
William Ray
502/651-8841
Subscribers: 3,250
Channels: 67
Basic monthly rate: \$14.95
Utility use: load management, data acquisition, alternate telephone, traffic signal synchronization, high-speed data communication and meter reading
Established: 1989

Williamstown Cable TV*

400 N. Main St.
Williamstown, Ky. 41097
Chuck Hudson
606/824-3833
Subscribers: 1,011
Channels: 61
Basic monthly rate: \$16.95 going to \$18.95 in a few months
Utility use: no
Established: 1985

MARYLAND

Easton Cable TV*

142 N. Harrison St., Box 1188
Easton, Md. 21801
Bill Russell
410/822-6110
Subscribers: 4,850
Channels: 54 (capacity is 64)
Basic monthly rate: \$12.95
Utility use: no
Established: 1984

MUNICIPALLY OWNED CABLE TELEVISION SYSTEMS

MASSACHUSETTS

**Shrewsbury's
Community Cablevision***
100 Maple Ave.
Shrewsbury, Mass. 01545
Thomas R. Josle
508/841-8500
Subscribers: 10,000
Channels: 71
Basic monthly rate: \$20.20
Utility use: emergency alert system,
institutional network, energy —
management
Established: 1983

MICHIGAN

**Coldwater Board of Public
Utilities (City One)**
28 W. Chicago St.
P.O. Box 469
Coldwater, Michigan 49036
Linda Cox
(517) 278-1380
Subscribers: 590
Channels: 78
Basic monthly rate: \$34.80
Utility use: SCADA, Internet and
internal communications
Established: 1988

Crystal Falls, City of*
401 Superior Ave.
Crystal Falls, Mich. 49920
Charles C. Nordeman
906/878-6847
Subscribers: 880
Channels: 26 (capacity is 36)
Basic monthly rate: \$10.60
Utility use: none
Established: 1959

Lowell Cable TV*
127 N. Broadway
Lowell, Mich. 48331
Paul G. Christman
616/887-8406
Subscribers: 2,280
Channels: 43
Basic monthly rate: \$19.95
Utility use: no
Established: 1982

**Negaunee
Cable Television System***
Box 70
Negaunee, Mich. 49866
Ken Huber
906/475-7700
Subscribers: 1,463
Channels: 32
Basic monthly rate: \$12.95
Utility use: no
Established: 1984

Norway CATV*
Box 194
Norway, Mich. 49670
Tom Pearman
906/563-9841
Subscribers: 1,640
Channels: 34 (capacity is 38)
Basic monthly rate: \$8.00
Utility use: emergency warning
system up grading with fiber &
Electronics
Established: 1964

Wyandotte Municipal Service*
3005 Biddle Ave.
Wyandotte, Mich. 48192
William Booker
734/324-7100
Subscribers: 10,160
Channels: 52
Basic monthly rate: \$20.60
Utility use: plan to use for meter reading
Established: 1983

MINNESOTA

Bagley City Cable TV*
Box M
Bagley, Minn. 56621
Michael Monsrud
218/684-2300
Subscribers: 565
Channels: 26
Basic monthly rate: \$12.50
Utility use: no
Established: 1976

**Coleraine Cable
Communication System**
Box 670
Coleraine, Minn. 56722
Pat Decker
218/245-2112
Subscribers: 372
Channels: 45
Basic monthly rate: \$15.00
Established: 1982

Fosston Cable TV*
220 First St. N.E.
Fosston, Minn. 56542
Russell Earls
218/435-1737
Subscribers: 633
Channels: 26
Basic monthly rate: \$11.50
Utility use: load management
Established: 1976

Jackson Municipal TV System*
80 W. Ashley St.
Jackson, Minn. 56143
Curt Egeland
507-847-3225
Subscribers: 1,584
Channels: 34
Basic monthly rate: \$7.50
Utility use: no
Established: 1957

**Lakefield
Public Utilities & Cable TV**
P.O. Box 1029
Lakefield, Minn. 56150
Cleo Wicks
507/882-6363
Subscriber: 714
Channels: 33
Basic monthly rate: \$17.84
Established: 1983

Marble, City of
Box 38
Marble, Minn. 55784
Carolyn Kolar
218/247-7576
Subscribers: 370
Channels: 32
Basic monthly rate: \$15.00
Established: 1983

City of Taconite Cable TV
22 Haynes St.
Taconite, Minn. 55786
Michael Troumbly
218/245-1831
Subscriber: 110
Channels: 28
Basic monthly rate: Free
(done through taxes)
Utility use: None
Established: 1984

Westbrook Cable TV*
Box 308
Westbrook, Minn. 56183
Dennis Jutting
507/274-6712
Subscribers: 340
Channels: 38
Basic monthly rate: \$18.95
Utility use: no
Established: 1981

**Winoom
Cable Communications
System***
444 Ninth St.
Winoom, Minn. 56101
Dennis Nelson
507/831-6130
Subscribers: 1,650
Channels: 41 (capacity is 66)
Basic monthly rate: \$16.25
Utility use: emergency alert system
Established: 1985

MISSOURI

Newburg Cable TV System*
Drawer K
Newburg, Mo. 65550
Phyllis Jacobs
314/762-2316
Subscribers: 250
Channels: 13
Basic monthly rate: \$8.50
Utility use: no
Established:

Unionville Cable*
1611 Grant St., Box 255
Unionville, Mo. 63585
Jerry Tilden, Operator
660/947-3818
Subscribers: 1,128
Channels: 26 (capacity is 30)
Basic monthly rate: \$12.00
Utility use: emergency alert system
Established:

NORTH CAROLINA

**Morganton
Public Access System***
203 W. Meeting St., P.O. Box 1029
Morganton, N.C. 28680
Tom Peeler
704/438-6363
Subscribers: 6,000
Channels: 74
Basic monthly rate: \$23.75
Utility use: none
Established: 1991

OHIO

**Wadsworth Electric &
Communications**
120 Maple St
Wadsworth, Ohio 44281
William J. Lyren
330/335-2707
Subscriber: 2,200
Channels: 78
Basic monthly rate: \$5.50/24
channels, \$24.14/62 channels
The hybrid fiber-coax broadband
system is used for SCADA,
telephone, P.C. networking in
addition to cable.
Established: 1997

OREGON

Cascade Look CATV*
Box 308
Cascade Look, Ore. 97014
Mike Bridges
503/374-8484
Subscribers: 405
Channels: 18 (capacity is 38)
Basic monthly rate: \$16.50
Utility use: none
Established: 1972

Lexington, Town of
Lexington, Ore. 97839
Mayor Robert Taylor
503/989-8508
Subscribers: 100
Channels: 12
Basic monthly rate: \$8
Established: 1959

MUNICIPALLY OWNED CABLE TELEVISION SYSTEMS

PENNSYLVANIA

New Wilmington Borough Cable TV*

134 High St.
New Wilmington, Pa. 16142
Fred Garrett
412/946-8167
Subscribers: 550
Channels: 31
Basic monthly rate: \$12.00
Utility use: none
Established: 1979

Pittsboro Community Antenna System*

662 Sixth St.
Pittsboro, Pa. 15140
Josephine Higgins
412/372-8500
Subscribers: 1,530
Channels: 40
Basic monthly rate: \$16.00
Utility use: none
Established: 1983

SOUTH DAKOTA

Beresford Cablevision*

101 N. Third St.
Beresford, S.D. 57004
Wayne Aklund
605/763-2500
Subscribers: 771
Channels: 38
Basic monthly rate: \$10.95
Utility use: load management
Established: 1983

WASHINGTON

North Bonneville Community Cable TV

Box 7
North Bonneville, Wash. 98639
Ray Hays
509/427-8183
Subscribers: 187
Channels: 18
Basic monthly rate: \$13.00
Established: 1982

Sumas TV Cable System*

Cherry St., Box 9
Sumas, Wash. 98295
Rod Padden
360/988-6711
Subscribers: 382
Channels: 40
Basic monthly rate: \$13.00
Utility use: none
Established: 1983

Tacoma City Light

P.O. Box 11007
Tacoma, Wash. 98411-0007
Diane LaChel
253/502-8548
Subscribers: 2,000
Channels: 66
Basic monthly rate: Broadcast \$5.95,
Basic \$9.95, Standard \$23.50
Utility use: Department of the city
Established: 1988

WEST VIRGINIA

Philippi Communications System*

Box 480
Philippi, W.V. 26416
Joseph Metallano
304/457-3701
Subscribers: 1,563
Channels: 41
Basic monthly rate: \$24.29; 14-
channel service rate: \$13.84
Utility use: none
Established: 1986

WISCONSIN

Oconto Falls Cable TV*

104 S. Franklin St. Box 70
Oconto Falls, Wis. 54154
Pete Mann, City Administrator
414/846-4507
Subscribers: 916
Channels: 34 (capacity is 54)
Basic monthly rate: \$13.50
Utility use: maybe meter reading
Established: 1981

Two Creeks Cable TV*

6711 Nuclear Road
Two Rivers, Wis. 54241
Mary Ann Chervany
920/755-2221

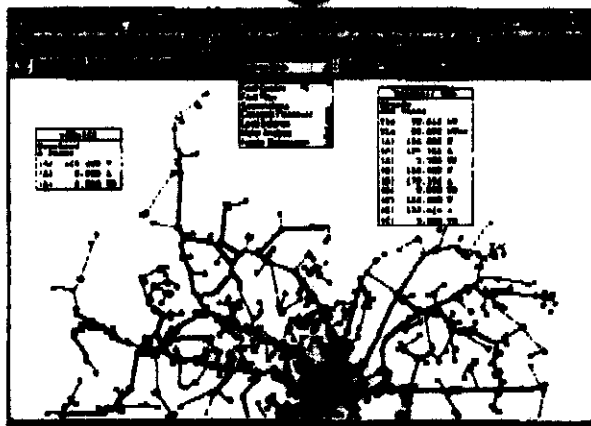
Subscribers: 160
Channels: 30 (capacity is 52)
Basic monthly rate: free
Established: 1986

WYOMING

Baird Cable System

Box 56
Baird, Wyo. 82322
Cleta Ginter
307/324-7853
Subscribers: 34
Channels: 14
Basic monthly rate: \$26.85
Utility use: none
Established: 1981

Competing in a deregulated industry just got easier.



Deregulation means that your customers can choose who supplies their electricity. And we all know that providing great service at an affordable cost is critical if you want to be the provider of choice. It has never been more important to keep customers happy.

WindMil® will help you create satisfied customers. This user-friendly system allows your engineers to provide the highest level of service at the lowest possible cost. When you need on-the-fly switching studies to keep the power on, WindMil performs. When you need to find the best way to configure your system to keep that industrial customer happy, WindMil performs.

When you need to make the most effective use of your distribution system so that customers automatically choose you, WindMil performs!

Are you interested? Call Now!



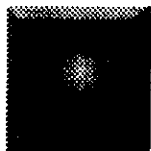
P.O. Box 5726, Abilene, TX 79608-5627
(915) 695-1642 / (800) 344-3647
FAX: (915) 690-0338
<http://www.milsoft.com>
info@milsoft.com

ATTACHMENT B

**WEB SITES OF
REPRESENTATIVE
PUBLIC POWER UTILITIES
THAT PROVIDE COMMUNICATIONS SERVICES**

Ashland, OR	www.ashlandfiber.net
Cedar Falls, IA	www.cfunet.net
Easton, MD	<u>www.eastonutilities.com</u>
Gainesville, FL	<u>www.gru.com</u>
Hawarden, IA	www.acsnet.com/hawarden
Longmont, CO	<u>www.ci.longmont.co.us</u>
Lusk, Wyoming	eu.microsoft.com/questions/who_motivates_us/Lusk_text.htm#FS
Newnan, GA	www.newnanutilities.org
Paragould, AK	www.clwc.com
Shrewsbury, MA	www.ci.shrewsbury.ma.us

ATTACHMENT C



Glasgow's Info-Highway Project

[Click here to ask a question of the entry.](#)

Category:	Business
Date of First Use:	June, 1989
Number of Users:	7,000
Description of Users:	2,500 households and businesses subscribe to cable television service, 750 PC workstations attach to the network, approximately 120 telephones are served by the network
Number of Sites:	2,500
Networking:	120 miles of broadband cable serve cable customers through direct connection to tv sets; serves data customers through a connection to a broadband interface card in individual PC's or file servers; serves telephone customers by connection to a voice interface unit which provides dial tone ringing and other features.

Summary:

Our project was meant to improve the way the City's electric utility sells electricity, provide a competitive cable television and telephone marketplace, and institute a city-wide computer "network of networks". These goals have been accomplished through the construction of 120 miles of bidirectional broadband plant which touches each home and business within the City. As a result, the people of Glasgow enjoy information age services today that the rest of the country is only beginning to anticipate at some yet-to-be-defined time in the future.

Demonstration of the Utility and Capability of the NII:

Our project effectively demonstrates the "highway" capabilities of the NII. The highway metaphor is appropriate since our system functions in much the same way as the city streets. Many different services are available to the people of Glasgow through our system at the same time. One lane of our "highway" carries telemetry and commands that the electric utility uses to operate its distribution and transmission system. Other lanes carry meter readings from electric and other utility meters and commands to control capacitor banks and outdoor lighting installations. Some of the highway is used to provide a competitive cable television service and a competitive telephone system. As a result, Glasgow is one of only a handful of cities which offers cable television service from more than one provider. Glasgow is probably the only city in the nation which offers dial tone from more than one source. Still other lanes are used to institute a city-wide metropolitan area network.

The city-wide network connects all of the K-12 classrooms, City agencies, utilities, and a growing number of homes and businesses. That means that children in an elementary school classroom can exchange E-Mail with the Mayor or the Superintendent of schools or a classmate with equal aplomb. It also means that parents can utilize the software, which they have purchased with their tax dollars or the schools, at night when before it was not being used at all. It also means that the lines of communication and involvement between parents, teachers, and school administrators (as well as the business community) have been opened up as they have never been before. Also, since all of the utilities and city and county agencies are on-line, most of the information which the public has bought and paid for is now available from any computer terminal in town which is attached to the network, twenty four hours a day. Amazingly,

this information now comes to you instead of you having to go to city hall or the court house to get it.

A system like Glasgow's, flexible enough to accommodate whatever technology comes along or whatever services the people wish to receive, must be the distribution system which will be the electronic equivalent to today's local streets, driveways, and sidewalks. A National Information Infrastructure will be the equivalent of the Interstate Highway system which will provide the capability to leave the local systems like Glasgow's and move information all about the nation and the world.

Example of Practical Usage of the NII:

This project's practicality is demonstrated in its very existence. It is not a pilot or demonstration but rather a real, on-going, growing and economically successful project. Its ability to better manage the distribution of electric power has saved the people of Glasgow over \$175,000 per year for over five years.

The competition in the cable television marketplace, which this project enables, saves the people of Glasgow over \$1.2 million per year through reduced rates. The value of the drastically improved service and the amount of local programming available to the local citizens also has great value albeit difficult to quantify. In reality, these two functions alone amortize the cost of constructing the system. However, there are benefits that are not directly based in economics. The cable service is also used to educate. Local broadcasts of government meetings and classroom activities go far beyond the norm for any cable operator. In fact, the system is used for interactive distance learning and one elementary school uses fifth graders to produce a weekly newsmagazine program which is broadcast live to everyone in town. Another channel is utilized by a high school marketing class. It is called the AdVantage Network and all of the programming and advertising sales are produced by the class and their programs are distributed right from the high school classroom. As a result, 50% of the potential cable television customers subscribe to our system. The telephone service offered by the project also puts GTE on its toes and has already convinced them to put in a new digital switch and offer services it does not offer in other markets as small as Glasgow.

Probably the most dramatic results of our project are only beginning to be realized in the provision of connections to the city-wide computer network. In the beginning it was only used to create a virtual education network to replace a system of many standalone networks with no connectivity to each other. We then took what we had learned in tying the schools together and helped create a Geographic Information System tying PC workstations in city and county government agencies as well as local utilities to share mapping and databases with each other and the school network. Now the system includes a tie to all local traffic signals for synchronization and monitoring as well as the local realtors MLS information and soon the local law library.

The project is a powerful example of how anxious the public is to utilize the NII when it is made available. It shows how important it is to get started now. It also demonstrates how important it will be to not only make the capabilities available but also to create standard "cook-book" solutions and educate home and business owners on how to utilize the technology.

Encourages and Motivates Use of the NII:

Over 350 other cities, 30 private companies, and scores of reporters and researchers have come to Glasgow to study our project. They come because it is real. It is delivering services which are cost effective to an ever increasing number of customers. It is founded in reality instead of conjecture. This project then encourages others to replicate it. In fact several cities are in the process of doing just that. When others see 34 people in a rural community of 14,000 people are able to accomplish many of the services only mentioned as a dream by the prognosticators of the NII they rightly assume that they can do it too.

One of the big secrets to the success of our project has been our willingness to offer a total solution to our customers. We are convincing businesses that did not even own a PC to put in several PC's and a network and a file server. Why? Because we have been willing to design their networks, install them, recommend and install the software, provide connection to other networks, and support them on site as well as by telephone anytime they have a problem. This is not a new idea. It is called "customer service" and it is the only real obstacle that stands between the average consumer today and the consumer which is taking full advantage of the NII.

It is easy to see how the growth of the computer networking portion of our project will grow. Initially we support the

installation of a stand-alone network in one of our customers businesses. We teach them how to use the network and especially how to use E-Mail within that business location. Next we connect them to the city-wide network and educate them in the use of E-mail between themselves and other businesses and individuals within Glasgow. We also teach them how to use the same network to access information on the school's file servers and the GIS file server. As the NII evolves and our network is tied to the Internet, our customers will use the same skills we have taught them about accessing information and using E-Mail locally to fully exploit the capabilities they will have to perform those communications with anyone in the world.

Thus, the innovation in our project rests not solely in the technology of providing high speed communications directly to the home, it also is innovative in its "democratization" of this technology. This project aims to make the information, presently utilized by a precious few in major metropolitan areas at a very high cost, available to all at a cost roughly equal to the cost of providing the service. In other words, it takes the "highway" metaphor seriously.

Advice:

Projects such as Glasgow's are much more deeply founded in politics than technology. A community must have a group of dedicated opinion leaders willing to communicate the vision of how everyone's lives can be enhanced through the creation of competition in former monopoly markets and the provision of information-age services today rather than tomorrow. This core group must be capable of communicating the relative simplicity of utilizing this technology if it is provided by local people willing to furnish complete solutions and ongoing support for those willing to take a chance on the information superhighway.

Barriers:

Even though projects like this one are most likely to be replicated in communities unlikely to be slated for installation of broadband networks by the telephone companies or cable companies anytime this century, those companies will likely protest if a community elects to construct a project similar to Glasgow's. However, this is actually a healthy situation. It is very likely that just such competitive pressures will be necessary to spark interest by the private sector in beginning to actually construct such systems instead of continuing to posture about how these systems will be constructed sometime in the future.

Contact Information:

William J. Ray

Glasgow Electric Plant Board

Superintendent

P. O. Box 1809

Glasgow, Kentucky 42142

Email: wray@glasgow-ky.com

Phone: (502) 651-8341

FAX: (502) 651-7572

Primary Activity:

Utilities

Verification Method:

Our project would be best verified via a site visit. So far representatives of over 350 cities have already visited.

[Click here to go back to the main National Information Infrastructure page.](#)

ATTACHMENT D

Journal of Municipal Telecommunications, Vol. 1 No. 1, April 1999

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"The Little Town That Could" ... Did!

by **Gerald D. Quick**, General Manager, Harlan Municipal Utilities, Harlan, Iowa

"The Little Town That Could" ... Did! It's a cute saying or motto for a community to have, and many times that's all they are -- cute little sayings. However, for this small, rural community of around 5200 population, it actually describes the character of the community.

Who We Are & How We Got There

Harlan Iowa is like many other small rural mid-west communities. It is the county seat of Shelby County, and has, what would be considered by many, a traditional agriculturally based economy. As another source put it, Harlan is "an island in a sea of agriculture". The community's utility services - electric, natural gas, water, and now telecommunications - are all municipally owned, operate under the name of the Harlan Municipal Utilities (HMU) and governed by a separate Board of Trustees.

Not unlike other rural communities, the 70's and 80's took their toll on the farm population. Overall county population was declining and something had to be done to stem the tide. Rather than succumb to these negative pressures, community leaders began a process of self-evaluation to assess community strengths and weaknesses in preparation for life in the 21st century.

The process yielded outstanding results. It was agreed that if the community was to be competitive and survive in the 21st century, two key elements had to be satisfied: the development of an aggressive community marketing plan and the development of an effective communications network.

It was during this time that community leaders put together a plan to aggressively seek out and attract new business and industry to the area. Economic Development was the name of the game and it produced results. Several large entities did select Harlan as a place to locate or expand their businesses, which resulted in job creation and economic growth. This effort brought employment opportunities for some but not the higher paying jobs in clean industries that so many towns are pursuing. It was recognized that Harlan needed an edge.

About the same time, utilities all across the country were experiencing the impact of the Oil Embargo. Congress even passed legislation restricting how scarce energy supplies could be used and utility companies placed moratoriums on new customer hook ups. Supplies were short, prices were sky rocketing and customers were picketing Utility Offices demanding lower rates. The early to mid eighties saw utility companies, government agencies and customer groups scrambling to find ways of reducing energy requirements. Terms like Integrated Resource Plan (IRP) and Demand Side Management (DSM) were popping up and some took root.

As a result, during the late eighties, HMU and many other utilities across the country were investigating the feasibility of installing a fiber optic network to be used in the deployment of a Supervisory Control and Data Acquisition (SCADA) System. With this network they could monitor and control the electric, natural gas, water systems and manage system loads. The benefits were obvious. More sophisticated system control meant being able to operate the system in the most effective way possible helping to keep rates under control and more disposable income in ratepayer's pockets.

HMU had been investigating the feasibility of installing a fiber optic network to facilitate load management since

1991, when other uses for such a system were becoming apparent including CATV, Internet, Municipal Area Network (MAN), security systems, and medical monitoring and diagnosis. With this knowledge, citizens became encouraged and energized with the prospect of solving several long-term problems with the incumbent CATV provider. Channel selection, service, product quality, community commitment and the fact that there was no local presence in the community are a few of the issues that had subscribers disgruntled.

Public Approval

As the word of this spread throughout the community, individuals began investigating the feasibility of providing competitive CATV programming in the City. A citizens committee, the Harlan Citizens for an Information Network, was formed in 1993 for the purpose of gathering information and sharing it with residents. An exploratory survey of citizens was conducted in that year and indicated strong support for a City owned and operated CATV system. Following the strong showing in the initial survey, a follow up, more detailed feasibility study was conducted in 1994. Numbers and data collected in that survey also provided very strong support to move forward with such an effort.

Prior to the preliminary work being done in 1993, it was realized that the then current state statutes did not allow Municipal Utilities to form Cable TV Utilities. HMU lead a successful effort to change the statutes paving the way for the community to move forward with its effort. The state legislature passed and the governor signed into law enabling legislation during the 1993 legislative session.

On May 16, 1995, voters went to the polls in a special election to vote on two ballot issues. They were:

1. "Should the City establish a Municipal Cable Communication System as a City Utility?" and,
2. "Should the system be controlled by a Board of Trustees from the City's Electric, Gas and Water Utilities?"

Both of these issues passed with a 70% voter approval.

More Than CATV

Since HMU was already in the process of developing a fiber network for energy management purposes, the initial design work had already begun. The advent of adding other products and services over the same network required further investigation into the type of communication infrastructure needed to fulfill its obligations to the community. Several goals were identified for a municipal communication system:

- Support the Internal Needs of the Electric and Natural Gas Utilities in a Deregulated Environment,
- Enhance Economic Vitality of the Community, and
- Create Multiple Revenue Streams over a Common Infrastructure:
 - CATV
 - Broadband Modems/Internet
 - Municipal Area Network (MAN)
 - Security and Media Monitoring, and
 - Utility Metering and Load Management

The System

The decision was to install a Hybrid Fiber-Coax (HFC) network. This network technology provides several advantages when compared to traditional coax CATV systems. They are:

- 2-Way Communication to the Home,

- Significant Capacity Increase (750 vs. 330 MHz Bandwidth),
- Capable of Supporting Future Digital CATV Signals,
- Improve Reliability and Robustness:
 - Redundant Fiber Paths
 - Reduced Number of Amplifiers
 - Status Monitoring for All Active Network Devices
 - UPS for Network Power Supplies
 - Reduced Distortion (Fewer Cascaded Amplifiers)

The HFC network approach offered one other significant advantage. It supported multiple communication services over shared infrastructure. The fiber backbone could support utility needs for transfer trip relaying, SCADA, and Wide Area (or Municipal Area Network - MAN) for network services. The broadband coax provides access to the home and business to support CATV, "Ethernet" cable modems to access 10 Mb channel without tying up a telephone line, and utility applications including real-time metering and load management.

System design characteristics include:

- The fiber-optic backbone was based on a 60-fiber, single-mode, self-supporting, loose-tube buffer cable suitable for both aerial and direct burial.
- The coax outside-plant included both passive and active devices and involved 30.5 route miles requiring, 43 cable miles and passing approximately 2000 of Harlan's homes.
- The initial system comprised four nodes. System redundancy was included in the fiber routing and node equipment selection.
- The CATV headend uses a 750-MHz design. A grouping of one 12-ft steerable, four 14.7-ft fixed position dishes and a single 400-ft off-air tower provides access to both satellite and local broadcast programming selections.
- The MAN utilizes a 155Mbps bi-directional ATM backbone that interfaces with existing LANs at 10/100 Mbps.

HMU considered its investment from both a financial investment viewpoint and as a basic infrastructure for the economic vitality of the community.

Build It and They Will Come

Subsequent to the election, network design and specification drafting was completed and bids were solicited. Construction commenced in late 1995. First elements of the HFC network were completed by the end of June 1996. This provided the media over which head-end testing could be completed. Initial Commercial operations were launched in September 1996. During this period, services were offered to employees and selected others on a test basis to shake down operations and gain experience with customer support. However at this point in time, drops had not been installed to customers homes.

As construction and testing of the system progressed, a charter subscriber campaign was conducted to confirm the level of community support and to facilitate planning of drop installations. Charter subscribers were offered some incentives to sign up early and were told that service would begin in the fall. The results were outstanding. Over 1200 residents and businesses signed up as charter subscribers. Out of a reported 1700 customers served by the incumbent provider, this was about 70% of their saturation in the community. The community support was there in just about the numbers as indicated by the vote to establish a Municipal Cable Communications System. To say the least we were encouraged.

Drops to homes were planned to follow the installation pattern of the electric system in that where electric lines were overhead, cable drops would be overhead; and where electric lines were underground, cable drops were to be underground. As full scale commercial CATV operations began in the Fall of 1996, the first node to be activated was in the part of town where electric lines were overhead and thus drops for the most part were installed overhead. Installations went fairly smooth. However, as we moved into the next node, much of the system was designed to go underground and in the front easements between the sidewalk and street - and people came "unglued". They did not want those little green plastic boxes in their front yards. Now, other service providers have their boxes in the front easements - cable and telephone. Their boxes are metal, some rusting, and in most cases larger than ours, but residents must have just reached the saturation level for utility boxes in their front yards.

Calls were made to City Officials and a group concerned citizens (some angry) were present at the next Utility Board Meeting with the intent of putting a stop to this installation procedure. Given the fact that nobody usually shows up at Board Meetings and in light of the public outcry, the Board decided to halt installations and investigate the feasibility of placing the little green pedestals in the rear easements. The investigation was done without many exceptions; the pedestals could be placed in rear easements however not without certain costs being incurred including the following:

- the redesign process would delay installations 3 to 4 months,
- redesign would add costs to the project,
- installation costs would escalate due to the difficulty of installation,
- installations would be postponed due to winter weather, and
- revenue losses would be substantial.

However, this is the value of local control for a community. The people spoke, the Board listened and took action based on what they felt was in the best interest of the community. The project was stopped until redesign could be completed and installations could not resume until late February 1997.

Because of this action, charter subscribers were becoming a little restless since they were anticipating installation in late 1996, but most of them stuck with us. As a matter of fact, as customers were hooked up, they were amazed at the quality of picture and other features we were able to bring them. An interactive on screen program guide, point and click pay per view and expanded channel selections are only a few of the enhancements offered over the incumbent provider. In fact, some customers reported that TV sets planned to be scrapped were now serviceable. Customers were happy.

Employees Key

Our employees deserve most of the credit for the success of the roll out. They responded to customers questions, took whatever time was necessary to explain our system to them, respected their property and were on time for appointments. Third party crews were tried for a period but did not perform up to the customer relation's standards established at HMU. Therefore, all installations were completed with our own employees including those from other departments - Electric, Gas and Water - and they are to be complimented.

Reality of Competition

Now, nobody expected the incumbent provider to just go away. They have been a fierce competitor. Our initial service provided for 43 channels of programming in our expanded basic package for \$18.95 per month compared to the incumbent providers 34 channels of programming in their expanded basis package for \$20.64 per month. In subsequent months, the incumbent lowered their price to \$16.95 per month for their expanded basic package and offered compressed digital service. The compressed digital added 18 channels of regular programming with additional offerings in premium, pay per view and music channels. The price for this service is difficult to pin down depending

on the day you call and who you talk to, but they have been advertising their expanded basic plus compressed digital for \$20.25 per month plus \$ 3.30 per month for the digital converter box. For a similar channel line- up in a town 20 miles North of Harlan serviced by the same incumbent provider runs about \$20.00 per month more than in Harlan. In February of this year, HMU raised cable rates to \$20.94 per month. This was the first increase in rates implemented from the time service commenced in 1996. Since roll out, 10 additional channels including Disney, formerly a premium channel offering, had been added to the expanded basis programming line-up without implementing a rate increase.

Other Products

In August of 1997, HMU rolled out its MACH I Internet and High-Speed Data service offering customers the choice of two products - 1.54 or 10 Mbps. This product received an enthusiastic reception and we currently have reached a saturation level of approximately 25% of cable subscribers. People are amazed at the speed and the fact that they do not have to tie up or have an additional telephone line when they are on the Internet. Our basic rate for the 1.54 Mbps service is \$34.95 per month for cable subscribers with unlimited usage. Rates for commercial customers begin at \$59.95 per month and at \$69.95 per month for high-speed data customers. Other services and rates are available for residents and businesses having special requirements not met by these services.

One exciting aspect of this network is the ability to provide work-at-home application for local businesses. After a successful Beta test, one local business currently has 10 employees working out of their homes and is extremely pleased with the results. They can find no degradation of speed and have seen improvements in productivity. This has opened new employment opportunities for both the company and the residents of Harlan.

Another feature of the network is the Metropolitan Area Network or M.A.N. Assisted through a federal grant provided by a program administered by the National Telecommunications and Information Administration, HMU was able to provide connectivity to the fiber for all of the public entities residing in Harlan including City offices, Library, Schools, County offices, Community College, Hospital, and HMU. Communications between these entities is done at speeds up to 155Mbps. Costs to maintain the M.A.N. are borne by the users. The private sector is also allowed to use the M.A.N. for a fee that helps defray costs to the public sector. With the growth of private sector use, costs to the public users is expected to be eliminated within two years. Present private sector users include a bank, farm service organization and grinding mill parts manufacturer.

HMU is also engaged in discussions with neighboring communities that have interest in remote head-end services. This is an excellent opportunity for Harlan to diversify head-end costs as well as helping meet the needs in the region. To date, several communities have had successful ballot issues of their own and have expressed interest in entering into a dialog concerning HMU providing them signal. As these opportunities unfold and are consummated, other services are also opened up to those communities, e.g. work-at-home, Internet and telephone.

Show Me the Money

As in any project of this magnitude, resources were an important consideration. The system was financed through a combination of funding sources including a grant for a portion of the MAN network, utility revenue bonds, an inter-utility loan and a bank loan as follows:

\$2,525,000 - Utility Revenue Bonds
500,000 - Bank Loans
568,000 - Inter-Utility Loan
200,000 - Commerce Department Grant

The utility revenue bonds reflect that the backbone and HFC infrastructure is owned by the Electric Utility with capacity leased to the Communications Utility. Special care is taken to assure that the Telecommunications Utility stands on its own without being subsidized by the other Utilities or taxes. Although current fiscal year revenue will not cover expenses, projections show the Telecommunications Utility to be in the black at the end of the next fiscal year, some nine years ahead of schedule. Some critics have argued that we have lost money every year since we began

operations. This is true but also a recognized fact. Original plans called for losses during the first years of operation. With debt financing, it is unreasonable to realize a break-even scenario during the first years of operation.

Staffing Needs

On the human resource side, staffing requirements included the hiring of a Superintendent early on in the project to be on site during the construction phase. As we neared the launch date, a Billing/Customer Service person and two cable Installer/Technicians were hired. After the workload grew to a substantial point, a Lead Technician was hired to supervise the daily activities and provide technical support to the installation crew.

Notoriety

To say that the formation of the Telecommunications Utility in Harlan has benefited the community is a tremendous understatement. It has been dynamite for this community. The advent of having a community "wired for the future" has energized it to the point that all economic development and community promotion materials tout this attribute of the City. We have been inundated with requests for tours and information from cities all over this country. From New York to LA and Texas to Minnesota they come. We have even received a call of inquiry from Australia. We have been published and talked about in every trade publication as well as local and regional newspapers - and even the New York Times did a feature article.

Lessons Learned

All of this fame and fortune has not come without a price however. I am reminded of an old Malayan Proverb that goes like this: *"Don't think there are no crocodiles because the water is calm"*. There have been many lessons learned and insights gained. Here are a few are:

- **Do plenty of ground work** - It is imperative that you get the community's input before you proceed. Do surveys, hold public meetings, make presentations to civic clubs, etc. This can not be over done.
- **Get as many people involved as possible** - The more people you have on your side the fewer possible dissenters will be out there.
- **Make these involved stakeholders** - If the people involved have a stake in part of the process, they will become owners of it and it will succeed.
- **Get the local media on your side** - This is the most critical item of the list. The media can crucify you and get public opinion going against you. Even if you can not swing them over to your side, you need to recognize their position and prepare a strategy to deal with it. There is another old saying that goes like this: *"Never pick a fight with someone who buys their ink by the barrel"*.
- **Plan, Plan, Plan** - After you do your initial planning do it over again and again. Something is bound to change and you need to compensate for it.
- **COMMUNICATE** - You can not over communicate. Everyone who has an interest in the project should be kept informed about what is going on. It will prevent delays and second guessing later.
- **Be prepared for competition because it will happen** - Just as you think that the incumbent has been whipped, they will do something that you did not expect or anticipate.
- **Set prices for services that allow for sound financial results, do not let emotion get in the way of practical decisions.** - You have to make decisions based on your costs and financial picture and not let the competition drive your business decisions. Good service and product quality produces quality results.

- **Document everything** - Good record keeping is worth its weight in gold. There will be times when you need to verify why things were done a certain way; the agreements made with a handshake or the decisions made on the fly.
- **Have a plan for staffing and secure TRAINED personnel** - This is the core of your organization. The people who will most likely be in touch with your customers. Staffing needs to be done well in advance of the launch date so you can hit the ground running.
- **Establish policies for Telecommunications** - You may have policies covering other utility operations but telecommunications is different. These policies must be in place prior to the launch date.

What's Next?

Telephone service? Security service? Wireless? Electronic commerce? The answer lies only in the imagination of the citizens of the community. Telephone service seems to be the next logical opportunity to pursue and we have been studying the feasibility of offering this service to the community. Preliminary community survey data show strong public support of HMU offering this service. GTE, the current incumbent provider of telephone service in Harlan, is currently going through the process of divesting itself of all its Iowa properties adding strength to our analysis. Partnerships are investigated with several third party telephone providers including a local telephone cooperative offering telephone service to greater Shelby County. Things are looking positive and next year at this time we may be in the telephone business.

Harlan has been served well by HMU for over 100 years bringing quality electric, natural gas and water service to the community. It is one of the strongest reasons offered in evidence as to why the community has entrusted HMU in this task. As the Vision Statement of HMU states, "Harlan Municipal Utilities will be recognized as the premier provider of utility services". True to this vision, HMU has stepped into the 21st Century by offering what may be its most important utility yet to the people of Harlan.

Harlan - "The little town that could" ... DID!

Comment on this paper and see what other readers have said.

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ATTACHMENT E

"Collaboration was key to our success, and we chose 3Com because of their superior systems solutions and their highly responsive, team-oriented approach to service and support."

Steve Dantine, Supervisor of Technologies, Vineland Public Schools

Vineland Public Sector MAN

Location

Vineland, New Jersey

Needs

Metropolitan area network for schools, city, utility company and other area businesses and organizations.

Applications

Video distance learning and videoconferencing, NetPrep vocational training, telemedicine, Internet access, and email.

Key 3Com Products and Services

CoreBuilder™ 7000 ATM/
Ethernet switches with
7600 Fast Ethernet
interface cards
Fast EtherLink® Server
network interface cards
SuperStack® II Switch 1100
Ethernet switches
SuperStack II Switch 3300
Fast Ethernet switches
Total Control® multiservice
access platforms
Transcend® Enterprise
Manager
Transcend Traffic™ Manager
3Com Care™ professional
services
Guardian™ maintenance
service



Vineland, New Jersey organizations unite to deploy 3Com public sector ATM metropolitan area network for next-generation services

School districts seeking a state-of-the-art network can learn a valuable lesson from Vineland Public Schools. When the southern New Jersey district envisioned its next generation of networked services, it anticipated a rich mix of voice, video and data applications, plus Internet access. What the district didn't figure was the \$750,000 yearly fee for leasing the phone lines needed to connect its 13 schools into a metropolitan area network (MAN). As an alternative, school officials considered laying down fiber optic cable throughout the city, but the district lacked the funds to string the cable and the rights of way to the

telephone poles needed to carry the fiber over Vineland's 69 square miles.

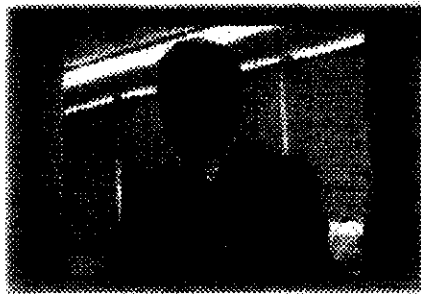
Rather than abandon its dream, however, the school district expanded it, turning its aspirations into a community-wide effort in concert with public and private organizations alike. In a unique partnership with the City of Vineland, the Vineland Municipal Electric Company and 3Com, the district spearheaded construction of a city-wide ATM (asynchronous transfer mode) MAN that no one partner could build alone. To cement the partnership, the schools paid 70 percent of the fiber installation and offered to provide free network management and Internet service to the city and utility. The city paid the remaining 30 percent of the installation fee, granted the rights of way needed to run the fiber over the telephone poles and waived all fees and taxes that would otherwise be imposed on the fiber. The Vineland electric company installed the fiber.

Supplementing the efforts of its Vineland partners, 3Com provided systems, services and support to deploy the fault-tolerant ATM/Ethernet infrastructure. At the center of the MAN is a 622 megabits-per-second (Mbps) OC-12 ATM backbone built on CoreBuilder® 7000 ATM/Ethernet switches. Local area networks (LANs) throughout the city run on CoreBuilder 7000 switches, SuperStack® II Switch 3300 Fast Ethernet switches and SuperStack II Switch 1100 Ethernet switches with remote users dialing into the network connect to Total Control®

Local Government

"To deliver the network-based services our students and faculty deserve, we had to think outside the box."

Steve Dantinne



Enterprise Hubs. In addition to hardware, 3Com provided Vineland with comprehensive network design and implementation services through 3Com Care™ Professional Services and provides on-going network support through its Guardian™ Maintenance Service program.

"To deliver the network-based services our students and faculty deserve, we had to think outside the box," said Steve Dantinne, supervisor of technologies for Vineland Public Schools, who galvanized the 65,000-strong community to develop the network. "The financial and right-of-way hurdles meant that we couldn't do it alone. Working hand-in-hand with the city and the city-owned utility, we were able to create an infrastructure that benefits all parties involved and can grow to support new public and private users. Collaboration was key to our success, and we chose 3Com because of their superior systems solutions and their highly responsive, team-oriented approach to service and support."

Advanced applications for public and private sectors

Scheduled for completion in June 1999, the new 3Com infrastructure will drive a number of new services for Vineland. Among the first applications deployed are email and Internet access for the city's 300 employees, 800 school faculty and 1,500 high school students, who now take advantage of reliable, high-speed research, communications and information-sharing capabilities. Eventually, the district's 9,300 students will have Internet access, and Vineland is investigating extending Internet access to all city residents.

Vineland's next wave of applications is even more ambitious for its schools, including instructional technologies such as converged video, voice and data computer labs in the high schools and CD-ROM jukeboxes for delivering multimedia mathematics, science, foreign language and other course applications to students in kindergarten through 12th grade. The school district also is deploying multimedia in its classrooms, using audio and video teaching aids to enrich the learning experience by making difficult topics and subjects less esoteric. Using Starlive real-time video services, the district plans to offer distance learning to expand the reach of its classes beyond the campus. The schools will also use Microsoft's NetMeeting for videoconferencing for offsite students and faculty.

In addition to its academic applications, Vineland's schools will soon offer 3Com's NetPrep courses, a series of vocational training classes that will be offered after school to students interested in learning about computer networking. The Vineland

MAN will also host a number of the schools' administrative applications to expedite such routine functions as records management, attendance reporting and grade tracking.

"We've got big plans for this network. It's going to automate and expedite a lot of our administrative functions and provide countless education opportunities," said Dantine. "Meanwhile, the city, utility and others will be able to take advantage of the high-speed infrastructure to enjoy benefits of their own."

In that spirit, the city this summer plans to take advantage of the MAN to roll out network-based telephony for City Hall, the Fire and Police departments and other departments spread through the city's 13 buildings. By moving its intra- and inter-department voice traffic off of the phone company network and onto the 3Com network, the city will enjoy substantial savings by eliminating those local and long-distance charges. Vineland additionally will employ a demographic information system to track population growth throughout the city.

The city anticipates introducing even more applications as other public and private organizations connect to the MAN. Vineland's South Jersey Hospital, for example, is considering a proposal to connect to the network along with other medical clinics and private doctors' offices for a new telemedicine service. The application will allow hospital doctors to care for patients at remote sites, eliminating the need for patients or doctors to travel to an in-person appointment. Meanwhile, city officials and local business owners are evaluating

extending the MAN to the Vineland Chamber of Commerce website to promote better business practices and increase communications with residents.

"By creating a highly scalable metropolitan infrastructure, 3Com has put us in the enviable position of being able to extend network service to the entire city," said Dantine. "While better education drove the creation of the network, it's now seen as a way to improve all communications and services throughout the city, in both the public and private sector."

Scalable infrastructure for city-wide access

Prior to the 3Com MAN, Vineland Schools had no MAN connectivity for its two high schools, four intermediate schools, seven elementary schools, kindergarten, preschool and other district sites. Their shared Ethernet LANs were based on hubs from Bay Networks and were unsuited for the district's plans for Internet access and multimedia services. The city's buildings were similarly unconnected. When the school district aligned with the city in 1997, both parties evaluated ATM solutions from Bay Networks, Cisco and 3Com. Impressed by 3Com's responsiveness, technical expertise and superior price/performance, Vineland selected 3Com to provide the systems and support needed to build its MAN.

"3Com showed more of a commitment to win our business and give us support," said Dantine. "They offered us powerful systems and reliable management, which we liked, but it was their responsiveness that put them over the top."

"By creating a highly scalable metropolitan infrastructure, 3Com has put us in the enviable position of being able to extend network service to the entire city."

Steve Dantine

Vineland Public Sector MAN

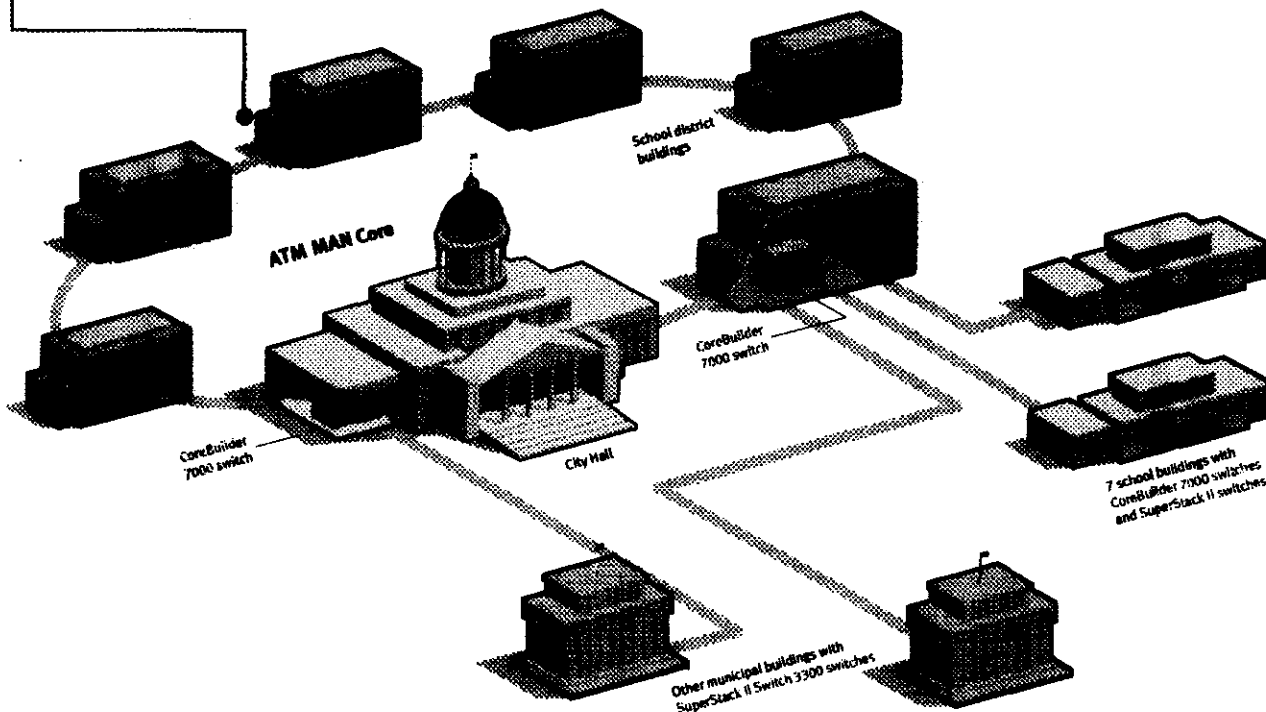
3Com

More connected.

Launched in July 1998, the MAN is based on a cluster of 14 CoreBuilder 7000 ATM/Ethernet switches, six of which form an OC-12 ATM backbone spread over six school district buildings. The remaining CoreBuilder 7000 switches are deployed at seven more school buildings and City Hall to connect them to the ATM backbone at 155 Mbps OC-3 speeds. At each of the school's core sites, a CoreBuilder 7000 switch equipped with a 7600 Fast Ethernet interface card provides 100 Mbps connections to SuperStack II Switch 3300 Fast Ethernet switches or SuperStack II Switch 1100 Ethernet switches at the LAN edges as well as to a mix of Novell NetWare and Microsoft NT application servers outfitted with Fast EtherLink® network interface cards (NICs). The SuperStack 3300 switches make switched 100 Mbps desktop connections while the SuperStack 1100 switches make switched 10 Mbps desktop connections. At City Hall, the CoreBuilder 7000 switch makes switched 10 Mbps Ethernet connections directly to desktop PCs. Mobile and remote network users use dial-up modems to make 56 Kbps analog connections to Total Control Enterprise Hubs.

Along with the 3Com systems, Vineland is using 3Com's Transcend® Enterprise Manager management software to control, configure and manage the MAN and individual LANs from a single management console. Transcend Traffix® Manager will let Vineland establish service-level agreements, monitor bandwidth usage across the network and react to user community needs. While 3Com Care engineers provided the network design, planning, configuration, installation and performance checks, Vineland is relying on 3Com's Guardian program to deliver ongoing, 24 x 7 support, free software upgrades and advance hardware replacement.

"Vineland has established the first network in New Jersey that unites such a broad collection of public and private groups, and we couldn't have built it without 3Com," said Dantine. "Ultimately, we'd like to see the entire community online, and with 3Com's excellent support and systems, we have an excellent chance of reaching that goal."



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ATTACHMENT F

Georgia Statewide Municipal Fiber Optic Network

MEAG Power

Douglas K. Lego - Manager of Telecommunications

June 30, 1998

Abstract

In early 1993, a group of municipals and the Municipal Electric Authority of Georgia (MEAG Power) discussed the notion of developing local community fiber optic networks interconnected by a statewide fiber backbone. The principal objective was to provide telecommunications services for the internal and core business needs of MEAG and the municipals. Once it was decided that a network would fulfill these needs, MEAG followed its statutory mandate to take advantage of economies of scale, and established two secondary objectives: (i) supplying broadband services for educational use and (ii) foster economic development by providing competitive telecommunications services through a state-of-the-art fiber optic infrastructure. With these objectives, the municipals and MEAG would offset their existing telecommunications expenses and create an additional revenue stream for their communities.

During this same period of time, the initial deployment of fiber optic cable and systems in a few of the cities was already underway. The fiber was typically being deployed for the municipals' core business but was also being installed at the request of specific customers. It became clear that the municipals could provide a beneficial service to their communities through the deployment of local fiber networks. Therefore, these municipals were anticipating the legal and regulatory changes that would be forthcoming and were anxious to provide services beyond their core business need.

Over the course of the last four years, there has evolved various Georgia municipal networks that will utilize MEAG Power's growing statewide fiber backbone. The statewide backbone will enhance their ability to meet the objectives described above.

Background

MEAG Power is a public corporation formed by the Georgia General Assembly in 1975 to provide wholesale electric power and related services to 48 municipals throughout the state of Georgia. MEAG's 1996 vital statistics include:

- **Customer's**
 - 48 Municipal Participants
 - 1 Wholesale Municipal Customer
 - 1,640 MW Peak Demand
 - 10.9 Billion kWh Sold
 - 3.7% Compound Annual Growth in Energy Sales since '85

- **Generation**

808 MW Nuclear	- Plants Vogtle & Hatch
750 MW Coal	- Plants Wansley & Scherer

- **Transmission**

1247 Route Miles	- 500kV - 46kV
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Joint owner of Georgia's Integrated Transmission System (16,000+ Mi.)

In the early 1990's, MEAG and a core group of it's municipalities standardized on a Supervisory Control And Data Acquisition (SCADA) platform that resulted in a statewide, wide area network (WAN). This SCADA WAN transmits telemetry, status and control data for MEAG's and the municipal's power operations. Shortly thereafter, MEAG worked with four of municipals to establish Regional Monitoring Centers (RMC's) which enabled these municipals to remotely monitor all MEAG's wholesale delivery points 24-hours/day by 7-days/week.

In addition, the WAN also enabled the provision of a client-server real-time weather application which provides real-time composite radar, single site radar and satellite imagery to the RMC's responsible for monitoring the MEAG delivery points. This system has rapidly expanded over the course of the last six years enabling additional MEAG municipals or "MEAG SCADA participants" access to a centralized SCADA system for use in their respective municipality.

The municipal statewide SCADA system and the notion of future networked applications such as load management, remote revenue meter reading, interactive video distance learning, centralized equipment inventories, centralized billing systems and others amongst the municipals and MEAG have been catalysts for developing a statewide fiber backbone. This paper will briefly describe the developments of four MEAG municipals, Marietta, Thomasville, Lagrange and Newnan, all of whom are MEAG SCADA participants, whom in that order, have been the first municipals in Georgia to become certificated as competitive local exchange carriers (CLEC) by the Georgia Public Service Commission (GPSC).

City of Marietta (Marietta FiberNet - www.MFN.net)

The city of Marietta, a northern Atlanta suburb (Figure 1), has an estimated population of 48,000, and through the Marietta Board of Lights and Water (MBLW) provides electricity to approximately 40,000 customers.

Marietta Power a division of MBLW, was responsible for the first deployment of fiber on Marietta's system. This fiber was installed at the request of a local hospital due to the need for broadband services between two of it's locations. The city utilized existing distribution infrastructure to install fiber optic cable at the customer's request.

In the same time period of the installation for the hospital, it was apparent in, and around Atlanta, that competitive access providers (CAPs) were becoming established successfully.

As the regulatory climate changed, through the passage of *The Georgia Telecommunications and Competition Development Act of 1995* (the "Georgia Act," sometimes

called S.B. 137) and the federal *Telecommunications Act of 1996*, Marietta Board of Lights and Water formed the division of Marietta FiberNet (MFN). MFN actively developed a local telecommunications strategy and was the first municipal in Georgia to make application for a Competitive Local Exchange Carrier (CLEC) certificate at the Georgia Public Service Commission (GPSC).

Marietta FiberNet has deployed and is actively expanding a SONET OC-48 network throughout Cobb Co., Georgia, and in addition has provided fiber connectivity to the MEAG Power headquarters in Fulton, Co. The objectives of MFN's network include providing broadband services to MBLW's and MEAG's core business, to local education, governments, and local businesses. The network will also foster competition amongst the competing local telecommunications service providers.

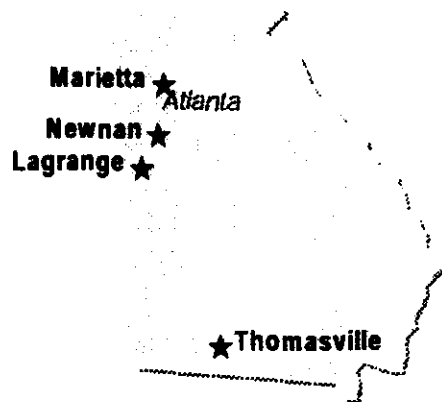


Figure 1

Georgia Public Service Commission (GPSC) - Marietta FiberNet Application

The Marietta FiberNet GPSC application was made in December, 1995 and was intervened by BellSouth, the Cable Television Association of Georgia (CTAG), AT&T and the Consumer's Utility Council (CUC). This application quickly became a focal point which would set statewide precedent on municipal entry into the telecommunications markets.

After two hearings, and considerable debate on the conditions to be imposed on MFN and potentially other municipals making CLEC applications, Marietta FiberNet was issued a CLEC certificate with the following conditions outlined below.

- **Universal Service Contributions on jurisdictional services**
- **Total Service Long-Run Incremental Cost (TSLRIC) study to demonstrate cost recovery in rates**
- **An appropriate accounting system demonstrating no cross-subsidies**
- **Pole attachments fees identical to those of other service providers**
- **Non-discriminatory franchise agreement with the City of Marietta**

- **Independent annual audit to ensure compliance with PSC conditions**

Stated in the findings and conclusions of the GPSC in Docket No. 6329-U:

*"The Georgia Act defines "telecommunications company" in O.C.G.A. 46-5-162(17), as "any person, firm, partnership, corporation, association or **municipal, county or local governmental entity** offering telecommunication services to the public for hire." The federal Act provides at Section 253 that "no State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."*

MFN is actively entering into agreements with Interexchange Carriers (IXC's) as a Competitive Access Provider (CAP) and in addition is providing broadband service to schools, local governments, and commercial businesses as it provisions services throughout Cobb County, Georgia.

Subsequent to the MFN docket at the GPSC, the following municipals have applied and received CLEC certificates with the same conditions.

City of Thomasville (www.Rose.Net)

Thomasville, Georgia, a rural community located in southwest Georgia (Figure 1), has an estimated population of 20,000 and approximately 13,000 electric customers. In 1995, the city of Thomasville, was the only municipal in the United States to receive a U.S. Department of Commerce, National Telecommunications and Information Administration (NTIA) grant for the deployment of video conferencing facilities between local schools. The city deployed an OC-48 SONET ring which provides broadcast quality interactive distance learning facilities to over twenty (20) Thomas County K-12 schools.

During that time, the city of Thomasville also configured their fiber network to provide data networking capabilities to their utility and city government operations. In addition, Thomasville provides network services to the local hospital as well as dial-up and broadband Internet service to it's community via *Rose.Net*.

Becoming the second municipal in Georgia to receive a CLEC certificate, Thomasville was the first MEAG municipal to provide competitive access services from their community across the statewide network. Thomasville as well is entering into agreements with IXC's, schools, local governments, and others as it provisions services throughout Thomasville, Georgia.

City of Lagrange (www.Lagrange-Ga.org)

Located in west Georgia approximately 60 miles southwest of Atlanta (Figure 1), the city of Lagrange has an estimated population of 30,000 and approximately 12,000 electric customers.

Lagrange was one of the first MEAG municipals to deploy fiber optic cable in an effort to promote competition and foster economic development. The city's initial installation of fiber was in conjunction with a carrier's carrier, in an effort to provide alternate access to select large industrial and commercial customers. While the city of Lagrange installed fiber optic cable on

their distribution system, the carrier installed a point-of-presence (POP) in Lagrange enabling Lagrange's customers to access IXC's at a more competitive rate than the incumbent local exchange carrier.

Most recently, The city of Lagrange has purchased the local cable system from Charter Communications. This resulted in a relationship between the city and Charter which enables the incumbent cable operator to continue providing cable TV services locally, while enabling the city to provide services supporting their core business objectives in electric, gas, water and sewer. In addition the city of Lagrange, being the third municipal to receive a Georgia CLEC certificate, will also provide other broadband services to the residences, schools, local governments and businesses in their community.

City of Newnan (www.west.ga.net/nwsl.html)

The city of Newnan, located approximately 35 minutes southwest of Atlanta (Figure 1), has an estimated population of 12,500 and through Newnan Water, Sewerage and Light Commission (NWSL), provides electricity to approximately 6,000 customers.

NWSL Commission initially deployed fiber optic cable within their community to interconnect an extensive SCADA system utilized for all of their utilities. It became immediately apparent that the fiber optic network was going to have a beneficial impact beyond the utilities' operations.

Since 1994, NWSL has been operating a SONET network that not only provided services to their utility operations but also provided data network connectivity between the schools in Coweta County and the Georgia Board of Regents statewide data network (PeachNet).

Recently, the city of Newnan, was the first municipality in Georgia to deploy and turn-up interactive services on a 750Mhz Hybrid-Fiber Coax (HFC) CATV system. The first customer was connected to the network in December of 1996. Since then, NWSL has connected over 2000 CATV customers to their network and upon request, provides broadband Internet connectivity as a value-added service. Most recently, the NWSL has announced that they will provision competitive local exchange services on the network through an alliance with a facilities-based Georgia CLEC.

MEAG Power (www.meagpower.org)

In 1995, the nine-member MEAG Telecommunications Committee was formed to set policies and direction to MEAG whom was in the planning process for the project. The Committee immediately established the core objectives of the statewide project which are principally, (1) Provide telecommunications for MEAG's core business needs and secondarily, (2) Enhance educational proficiencies through the provision of advanced telecommunications services and (3) Foster economic development.

After a two year period of soliciting interest amongst MEAG's forty-eight (48) municipals, and after thirty-two (32) local city councils voted to approve their city's participation in the project, MEAG contracted with these thirty-two "Telecom Participants" in January, 1997

to construct a statewide fiber optic network. By this time, there had been two iterations of plans depicting the feasibility of the project and the Telecom Participants were extremely motivated to move forward with the project.

The statewide plan, developed in four (4) phases, outlined a sequence of projects based on need and economic viability. In May of 1997 the Telecom Committee recommended to the MEAG Board of Directors to proceed with the construction of the fiber network between Columbus, Ellaville, Americus, Albany, Camilla, Thomasville and Bainbridge, Georgia (Figure 2).

MEAG has completed the first 207 miles of fiber optic cable deployment and is currently operating an OC-48 SONET network between Thomasville, Camilla, Albany and Americus, Georgia. MEAG Telecom is actively engineering network segments to complete the route from south Georgia to Atlanta as well as the network segment from Marietta to Calhoun, Georgia. In addition, network segments in central Georgia will be constructed in conjunction with the deployment of local networks.